

ABSTRACT OF THE DISCLOSURE

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A transmission apparatus to switch a line from a working line to a protection line in the event of a transmission-line failure on the working line. The transmission apparatus includes a classifying unit inputting cross-connect information from an external source and classifying the information into cross-connect categories for each channel; a communication unit gathering the cross-connect categories of each signal-adding or signal-dropping transmission apparatus of a channel and node information identifying the signal-adding or signal-dropping transmission apparatus by communications with an adjacent transmission apparatus for each channel; and a connection-implementation-classifying unit classifying an implementation of a connection between terminals into a corresponding connection category from among connection categories corresponding to a variety of connection implementations in accordance with gathered cross-connect categories of other transmission apparatuses and the cross connect category of the transmission apparatus employed in the station to create a table for executing control to switch a line in the event of failure for each channel.